

WHAT IS CLAIMED IS:

1. A high frequency switching component for being connected to a transmission circuit, a reception circuit, and an antenna to be used for switching either to a state in which the transmission circuit is connected to the antenna, or a state in which the reception circuit is connected to the antenna, comprising:

5 a multilayer circuit board, on which there is formed a circuit including:

a transmission circuit terminal to be connected to the transmission circuit;

a reception circuit terminal to be connected to the reception circuit;

an antenna terminal to be connected to the antenna;

10 a ground terminal;

a first diode whose anode is connected to the transmission circuit terminal and the cathode thereof is connected to the antenna terminal;

a second diode whose anode is connected to the reception circuit terminal and the cathode thereof is connected to the ground terminal;

15 a signal line for connecting the transmission circuit terminal, the reception circuit terminal, and the antenna terminal via the first diode; and

an inductor disposed between the signal line and the ground terminal to reduce noise on the signal line;

20 in which the transmission circuit terminal, the reception circuit terminal, the antenna terminal, the ground terminal, the first diode, and the second diode are disposed on a surface of the multilayer circuit board; and

at least a part of the signal line is disposed inside the multilayer circuit board.

2. The high frequency switching component according to Claim 1, wherein the inductor is provided by a line electrode disposed inside the multilayer circuit board.

3. The high frequency switching component according to Claim 2, wherein the inductor is disposed between the ground terminal and a part of the signal line at which the signal line is connected to the antenna terminal.

4. The high frequency switching component according to Claim 1, wherein the inductor is disposed between the ground terminal and a part of the signal line at which the signal line is connected to the antenna terminal.

5. A high frequency switching component for being connected to a transmission circuit, a reception circuit, and an antenna to be used for switching to either a state in which the transmission circuit is connected to the antenna, or a state in which the reception circuit is connected to the antenna, comprising:

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a multilayer circuit board, on which there is formed a circuit including:

a transmission circuit terminal to be connected to the transmission circuit;

a reception circuit terminal to be connected to the reception circuit;

an antenna terminal to be connected to be the antenna;

a ground terminal;

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a first diode whose anode is connected to the transmission circuit terminal

and the cathode thereof is connected to the antenna terminal;

a second diode whose anode is connected to the reception circuit terminal and the cathode thereof is connected to the ground terminal;

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a signal line for connecting the transmission circuit terminal, the reception circuit terminal, and the antenna terminal via the first diode; and

an LC filter connected to the signal line to reduce noise on the signal line;

in which the transmission circuit terminal, the reception circuit terminal, the antenna terminal, the ground terminal, the first diode, and the second diode are disposed on a surface of the multilayer circuit board; and

20 at least a part of the signal line being disposed inside the multilayer circuit board.

6. The high frequency switching component according to Claim 5, wherein the LC filter is disposed inside the multilayer circuit board.

25 7. The high frequency switching component according to Claim 6, wherein the LC filter is connected to a part of the signal line at which the signal line is connected to the antenna terminal.

8. The high frequency switching component according to Claim 5, wherein the LC filter is connected to a part of the signal line at which the signal line is connected to the antenna terminal.

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